

Applicant : John W. Worthington  
Serial No. : 10/674,633  
Filed : September 29, 2003  
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Attorney's Docket No.: 07844-600001 / P553

### REMARKS

Claims 1-32 were pending as of the action mailed on November 30, 2005.

Claims 1-3, 9, 12, 14-15, 17-19, 25, 28, and 30-31 are being amended; and claims 33-34 are new claims. Support for the amendments and the new claims can be found at page 1, lines 8-12; page 5, lines 7-13; page 6, lines 3-29; and page 9, lines 4-25. No new matter has been added.

Reexamination and reconsideration of the action are requested in light of the foregoing amendments and the following remarks.

### **Interview Summary**

The applicant thanks the Examiner for the courtesy of a telephone interview on January 19, 2006. Attending were Examiner Woods, Examiner Yang, and the applicant's representative, Clinton Martin. Mr. Martin argued that neither U.S. Patent Application Publication 2004/0056871 ("Milliron") nor U.S. Patent Application Publication 2002/0089500 ("Jennings"), when taken alone or in combination, disclose or suggest the warping tool recited in the claims of the present application. Examiner Woods recommended amending the claims to make some of the differences more clear.

### **Section 103**

Claims 1-32 were rejected as allegedly unpatentable over Milliron in view of Jennings. The applicant respectfully traverses the rejection.

As amended, claim 1 recites receiving user input specifying a warping tool, where the warping tool has a tool perimeter, one or more associated tool vectors, and an associated tool mesh. The tool perimeter defines a region of influence for the warping tool. User input is received that moves the warping tool within an image, and the warping tool is applied to the image in response to user input. One or more distortion vectors for the image are modified in response to the application of the warping tool, where the distortion vectors that are modified are within the region of influence when the warping tool is applied. The distortion vectors are modified based, at least in part, on the one or more tool vectors.

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Milliron discloses techniques for deforming computer graphics. *See abstract.* A warp designer establishes a set of source and target features on an image or vertex mesh and a parameter set for controlling a deformation. *See abstract, ¶72, and ¶¶75-77.* This information defines a transformation that maps a source coordinate frame to a target coordinate frame. *See ¶93.*

Jennings discloses a method for modifying a virtual object on a computer. *See abstract.* A portion of a volumetric representation of the object is converted into an alternative representation to allow a user to change the shape of the object. *See abstract.*

Neither Milliron nor Jennings, taken alone or in combination, disclose or suggest a user-specifiable warping tool that includes a tool perimeter, one or more associated tool vectors, and an associated tool mesh, where the warping tool can be moved within an image and, when applied to the image, modifies distortion vectors for the image within a region of influence based on tool vectors. Milliron discloses a vertex mesh that can be used to deform an image, but suggests that a user would select source and destination features in the image to define the deformation. *See Milliron, ¶76, ¶104.* Milliron does not disclose or suggest a user-movable warping tool that can be applied to the image to modify distortion vectors. Jennings discloses a paintbrush tool that is used to select an area of a surface to warp and a hand tool that is used to warp the selected area. *See Jennings, FIGS. 3-6 and ¶¶62-69.* However, Jennings does not disclose or suggest a warping tool that includes a tool perimeter, has one or more associated tool vectors and an associated tool mesh, and, when applied to the image, modifies distortion vectors for the image.

For at least these reasons, claim 1 and dependent claims 2-8 and 10-13 are allowable over the combination of Milliron and Jennings.

Claim 17 includes limitations similar to those of claim 1. Claim 17 and dependent claims 18-24 and 26-29 are allowable over the combination of Milliron and Jennings for at least the same reasons as claim 1.

Claim 9 depends from claim 6, which depends from claim 1. As amended, claim 9 recites receiving user input defining a strength and/or direction for the tool vectors that changes with time as the warping tool is applied to the image.

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The Examiner finds this limitation in Milliron's disclosure that a warp can evolve over time in an animation. However, Milliron does not disclose or suggest that tool vectors associated with a warping tool change with time as the warping tool is applied to the image.

For at least this additional reason, claim 9 is allowable over the combination of Milliron and Jennings. Claim 25 includes limitations similar to those of claim 9 and is allowable for at least the same reasons.

As amended, claim 14 depends from claim 1 and further recites applying the warping tool in response to user input defining a movement of the warping tool from a first location to a second location relative to the image.

The Examiner finds this limitation in Milliron's displacement of a point on the warp map from a source location to a target location in FIGS. 2A-2B. However, the movement of a point on a warp map while warping is not equivalent to the movement of a warping tool.

For at least this additional reason, claim 14 and dependent claims 15-16 are allowable over the combination of Milliron and Jennings. Claim 30 includes limitations similar to those of claim 14, and claims 30-32 are allowable for at least the same reasons as claims 14-16.

### Information Disclosure Statements

The applicant respectfully requests that the Examiner consider, initial, and return the form PTO-1449 that was filed on November 28, 2005.

### Conclusion

For the foregoing reasons, the applicant submits that all the claims are in condition for allowance.

By responding in the foregoing remarks only to particular positions taken by the examiner, the applicant does not acquiesce in other positions that have not been explicitly addressed. In addition, the applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.


Please apply \$100.00 for the two extra claims and additional charges or credits to deposit account 06-1050.

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Respectfully submitted,

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